

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Shih-Zheng Kuo	Serial No.	10/662,258
Confirmation No.	9035	Filed:	September 15, 2003
Examiner:	Steven Y. Kau	Group Art Unit:	2625
For:	IMAGE COMPENSATING METHOD		
Date:	August 19, 2010		

Mailstop Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST AND ARGUMENTS IN SUPPORT OF PRE-APPEAL BRIEF CONFERENCE

All pending claims are twice rejected in view of the Final Office Action dated October 21, 2009, the Advisory Action dated December 29, 2009, and the Non-Final Office Action dated April 29, 2010, and are therefore eligible for appeal. The rejection of pending claims 1-10, 12-24, and 31 is appealed. References to the "Response" refer to Appellant's amendment and response after final, dated December 17, 2009. References to the "Office Action" refer to the Non-Final Office Action dated April 29, 2010 unless otherwise indicated.

Appellant appreciates that the Examiner reopened prosecution in view of the Request for Pre-Appeal Brief Conference dated February 11, 2010. In response to the Office Action, Appellant respectfully requests a new appeal and herewith files a notice of appeal under 37 CFR 41.31 and an additional Request for Pre-Appeal Brief Conference. Appellant requests that the previously paid notice of appeal fee be applied to the new appeal.

The Examiner rejected claims 1-10, 12-24, and 31 under 35 U.S.C. § 103(a) over the newly cited reference of Liu (U.S. Patent 7,492,488) and variously in view of Lee *et al.* (U.S. Patent 6,178,015), Su (U.S. Patent 6,233,011), Selby (U.S. Patent 5,404,232), Horiuchi *et al.* (U.S. Patent 6,445,469), and Chien (U.S. Patent 6,480,306).

Grounds for appeal are as follows:

A. One skilled in the art would not look to combining multiple references to solve a problem which has already been solved by a single reference.

Lee is directed to controlling a position of a step motor by scanning an optical ruler concurrently with scanning the document. The Examiner acknowledged that Lee fails to disclose determining a compensational gray level value (page 7 of the Final Office Action dated October 21, 2009). Su is directed to a system that scans 20 lines of a white plate prior to scanning the document to determine the average value $G'(X)$ used for gray level compensation. In the Office Action, the Examiner introduced a new reference to Liu. Liu discloses storing the calibration data, when the scanner is powered on or at the point of manufacture, so that the calibration data does not need to be separately obtained for each subsequent scan (col. 4, lines 10-18).

One skilled in the art, when faced with the problem of determining a compensational gray level value, might look to one or both of Su and Liu. Either of Su or Liu provides methods for addressing the problem stated above, e.g. by pre-scanning a white plate and/or by storing calibration data prior to scanning the document. Appellant believes a recent ruling by the Board of Patent Appeals and Interferences is on point with the present rejection, where the Board ruled for the Appellant in finding that:

"Thus, we find the problem proffered by the Examiner [as the reason for motivation to combine Savill and Wu] is already solved by Savill. In the instant case, we conclude that a person of ordinary skill in the art *having common sense* at the time of the invention would not have reasonably looked to Wu to solve a problem already solved by Savill. Therefore, we agree with Appellants that the Examiner has impermissibly used the instant claims as a guide or roadmap in formulating the rejection." (Ex parte DEBORA RINKEVICH and JOHN MICHAEL GARRISON; BOARD OF PATENT APPEALS AND INTERFERENCES; 2007).

Appellant respectfully submits that one skilled in the art would not look to combine Lee with Su and Liu to solve a problem which has already been separately solved by either of Su or Liu. Rather, the Examiner has improperly used Appellant's claims as a roadmap to locate the reference of Lee, directed to the disparate problem of controlling a position of a step motor, in order to combine Lee's optical ruler with Su and Liu's methods of determining compensational gray level values.

B. Even if combined, the references fail to disclose the recited features.

The Examiner stated that the reference Lee discloses all the structural elements, and that Su discloses certain functional language thereof (page 4 of the Final Office Action). However, in order for the rejection on this basis to be proper, Lee's structural elements must be capable of performing the recited functions. The Examiner acknowledged that Lee fails to disclose how the optical ruler can be used to determine a compensational gray level value (page 7 of the Final Office Action). Lee's optical ruler is scanned concurrently with scanning the document to control a position of the step motor.

According to Su, 20 lines of a white plate must be scanned prior to scanning the document to determine the average value $G'(X)$ used for gray level compensation. If Su's white plate was scanned concurrently with the scanning the image, it would not be able to determine the average value $G'(X)$ beforehand. Accordingly, the combination fails to disclose the features recited, since the gray-scale values of Su's white plate must be read prior to scanning the document, and since Lee's optical ruler is unable to compensate for image brightness in a scanned image. As Appellant previously pointed out Liu discloses storing the calibration data, for example, when the scanner is powered on or at the point of manufacture.

C. The references teach away from the proposed combination.

According to Su, uniformity problems in a contact image sensor (CIS) result in a wide variation of voltage levels associated with scanning identical white pixels (col. 1, lines 27-43). Su solves this problem by scanning 20 lines of a white plate and taking an average value of the white levels for each of the 20 lines. Assuming Su were combined with Lee in the manner proposed by the Examiner, Su's microprocessor 36 would be unable to calculate the average white-level $G'(X)$ while scanning a first line of the image, as only one block of Lee's optical ruler would have been read. Since Su identifies that relying on a single pixel value to obtain the white value is unreliable, Su teaches away from such a combination that would require reading a single block of the optical ruler for each line of the scanned image, as taught by Lee. According to Liu, the calibration data is stored when the scanner is powered on or at the point of manufacture.

D. The proposed combination would render the resulting system inoperable.

By way of further example, the Examiner suggested that Lee discloses *scanning a continuous longitudinal calibration pattern while scanning the document to determine a correctional gray level value associated with the calibration pattern*, as recited by claim 1 (page 4 of the Office Action). The Examiner appears to be treating these recited features separately from those where Liu and Su were used to reject claim 1. Lee's gray level is used for an entirely different purpose than that disclosed by Liu in storing the calibration data and Su in scanning a white plate.

For example, since Lee's optical ruler includes alternating white and black blocks, Su's microprocessor would only obtain white values for the alternating white blocks. The black blocks provide zero brightness at point Pb (see Fig 3 of Lee). Accordingly, Lee's optical ruler is wholly unsuitable for compensating the gray-scale values of Su since only half the blocks (i.e. the white blocks) of Lee's optical ruler could be used to provide a calibration pattern for determining a compensational gray level. Similarly, Lee fails to provide any teaching for how the optical ruler could be combined with Liu's stored calibration data in the manner proposed by the Examiner.

E. The proposed combination requires the use of Impermissible Hindsight

Su operates similarly as described in Appellant's Background, where a calibration plate is scanned prior to scanning a document. Liu discloses storing the calibration data when the scanner is powered on or at the point of manufacture. Appellant respectfully submits that combining the references in the manner proposed by the Examiner would only be obvious with the benefit of impermissible hindsight and in view of Appellant's own specification. There is no teaching that suggests that the alternating white and black block optical ruler of Lee could be replaced or substituted with the white plate of Su, or that the white plate of Su could be replaced or substituted with the optical ruler of Lee. Similarly, the prior art as a whole fails to provide any motivation for combining Lee's optical ruler with Liu's stored calibration data in the manner proposed by the Examiner.

F. Proceeding Contrary to Accepted Wisdom Is Evidence of Nonobviousness.

Appellant respectfully submits that in each of the references (e.g. Chien, Selby, and Su) previously cited by the Examiner as allegedly disclosing determining *a correctional gray level value based at least in part on a scanned image of the reference pattern*, the calibration plate is initially scanned before the document itself is scanned. This is further consistent with Figure 1 of Appellant's Background which shows a pattern 116 positioned in a transverse position. MPEP 2145 (X)(D)(3) states that "The totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness." Liu discloses storing the calibration data when the scanner is powered on or at the point of manufacture.

Appellant respectfully submits, consistent with MPEP 2145 (X)(D)(3), that the Examiner's suggestion that the use of a plate oriented similarly as the optical ruler of Lee would be contrary to the accepted wisdom of the references which describe a transverse positioned calibration plate. This follows since Lee's optical ruler is unrelated to any determination of correctional gray levels, as acknowledged by the Examiner (page 7 of Final Office Action dated October 21, 2009).

The Appellant asserts all arguments made previously during prosecution of this application, whether or not explicitly discussed herein, and preserves the right to include these arguments in the Appeal Brief and Reply Brief, as appropriate. Appellant respectfully requests that these prior arguments be read and understood in light of the above mentioned grounds for appeal.

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Respectfully submitted,

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